



CHEMULT COMPOUND
VEGETATIVE MANAGEMENT PLAN

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The Vegetative Management Plan for the Chemult Compound was developed by a team of seven employees on the Chemult Ranger District. All the team members are currently residents on the compound.

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Ned Payne, Fuels Technician
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Carol Deger Reinhart, Forester/Silviculture
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Roberta Moltzen, District Ranger

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Arthur DuFault, Forest Supervisor

TABLE OF CONTENTS

	Page
INTRODUCTION	
Physical Limits	1
Existing Situation.	1
GOALS AND OBJECTIVES	4
EXISTING VEGETATIVE BENEFITS AND LIABILITIES	4
MANAGEMENT UNITS	
A. North Unit.	6
B. Residence Unit.	6
C. Hillside Unit	6
D. Powerline Unit.	7
Management Unit Analysis Table.	8
Priority for Treatment Table.	9
VEGETATIVE MANAGEMENT DIRECTION AND PROPOSED TREATMENTS	
North Unit.	10
Residence Unit.	11
Hillside Unit	13
Powerline Unit.	14
PROJECT IMPLEMENTATION	15

INTRODUCTION

Physical Limits:

The plan area includes the residences, administrative buildings and surrounding areas of the Chemult Ranger District administrative site.

The northern boundary of the area follows Miller Lake Road, Forest Road 9772, from the junction with Forest Road 9772-055, to US Highway 97. It borders highway 97 for a short distance to where the Southern Pacific Railroad tracks pass under the highway. The eastern boundary follows the railroad tracks south to the private land in Section 21. From that point the eastern boundary follows the section line south. The southern boundary of the area follows the private land boundary through Section 20 and extends up the hillside to Forest Road 9772-055. The 9772-055 road forms the western boundary of the plan area. These boundaries encompass approximately 160 acres.

Existing Situation:

The majority of the plan area is occupied by a lodgepole pine forest type. The hillside in the western portion of the area which is a mixed ponderosa pine and lodgepole pine timber stand, is the only exception. Throughout the compound area the vegetation present is characteristic of the Chemult area. The mountain pine beetle is presently active in the area attacking both lodgepole and ponderosa pine. Dwarf mistletoe and western gall rust are the most common diseases present.

Forest Service developments on the compound include the administrative buildings, residences for both permanent and temporary employees, a microwave radio tower, and a water tank and water system.

Presently within the study area there are six special use permits.

1. Midstate Electric Cooperative, Inc. (electrical lines)
2. Telephone Utilities of Eastern Oregon (telephone lines)
3. Cascade Natural Gas (gas lines)
4. Klamath County Schools (school bus parking)
5. Mr. Pugh (pumphouse)
6. State of Oregon Highway Department (highway maintenance station)

The state highway maintenance station, which involves approximately four acres, is currently classified as excess land under the asset management plan and is also under a proposed land exchange. No action under either program is expected in the near future.

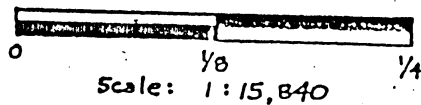
Since the establishment of the compound in the early 1960's, no formal treatment is known to have occurred prior to the summer of 1982. Personal firewood cutting, however, was ongoing during this time period.

The area was analyzed as part of the Chemult Environmental Assessment over the winter of 1981-82. The Decision Notice for the Chemult EA was signed in June 1982, by the forest supervisor. In July of 1982, a small sale was conducted to remove mountain pine beetle attacked and dead trees. Approximately 220 trees were marked for sale. Logging slash was piled and burned by district fire crews. In the spring of 1983, a portion of the compound area was hand planted under contract with lodgepole pine 2-0 nursery stock. Seedlings were planted at six by six foot spacing, resulting in approximately 1200 planted trees per acre.

Chemult Compound Study Area

Approximate Boundaries

Study Area Boundary
Adjacent Private Land



CDR 10-4-83

Miller Lake Road

R.8E.

F O R E S T

Ranger Station

Chemult

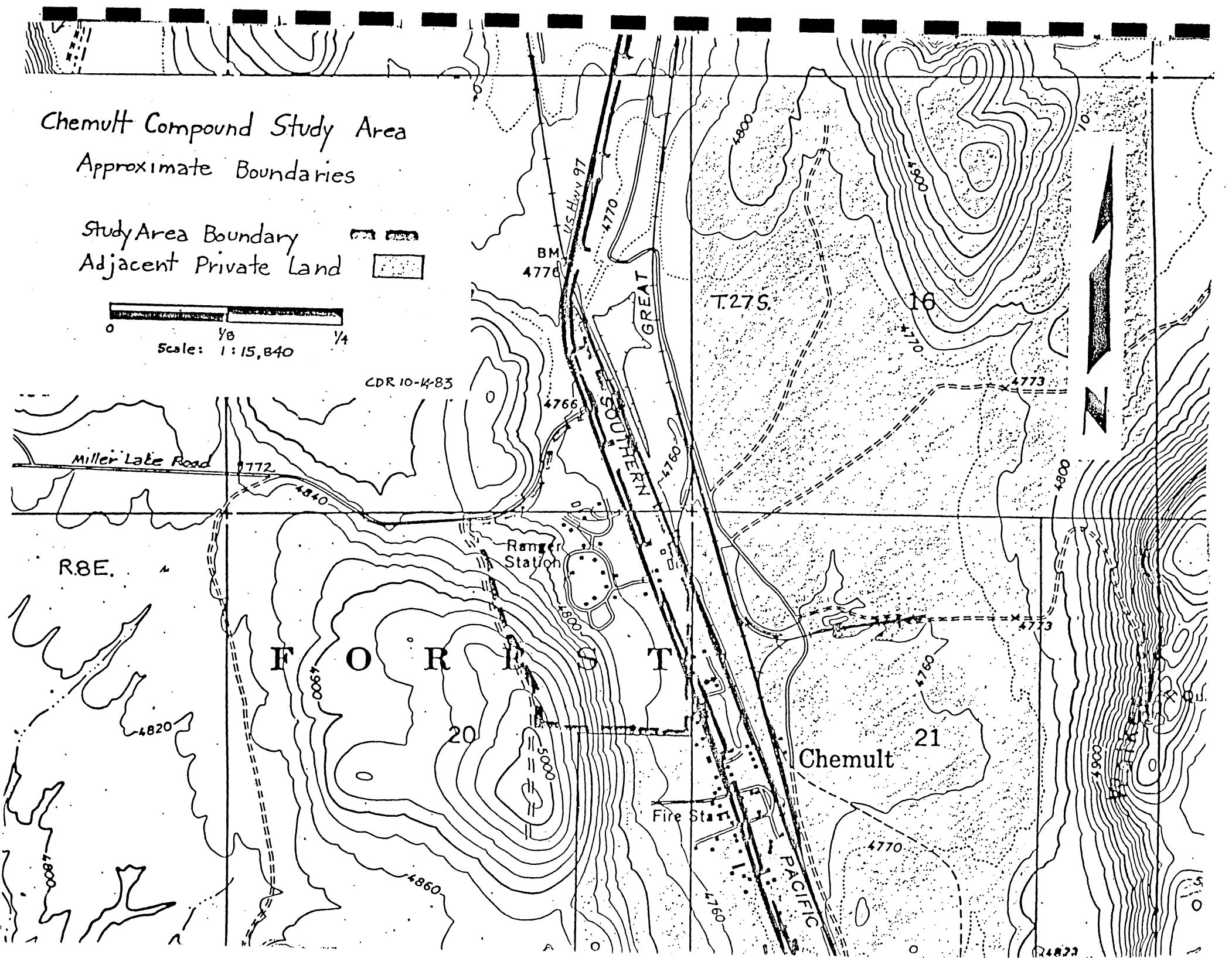
Fire Station

BM 4776

US Hwy 97

GREAT SOUTHERN

PACIFIC



GOALS AND OBJECTIVES

Goals and objectives for the Compound Area:

1. Eliminate hazard trees.
2. Reduce the amount of mountain pine beetle activity.
3. Increase vegetative diversity both in species and size classes.
4. Maintain the forest character of the area.
5. Reduce fire hazard.
6. Provide wildlife snags.
7. Improve and maintain screening between residences and between the residential area and the highway.
8. Enhance recreational opportunities, such as hiking, horseback riding and ski trails, for the compound residents.
9. Provide snow storage or piling areas.

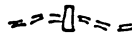
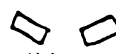
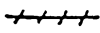
EXISTING VEGETATIVE BENEFITS AND LIABILITIES

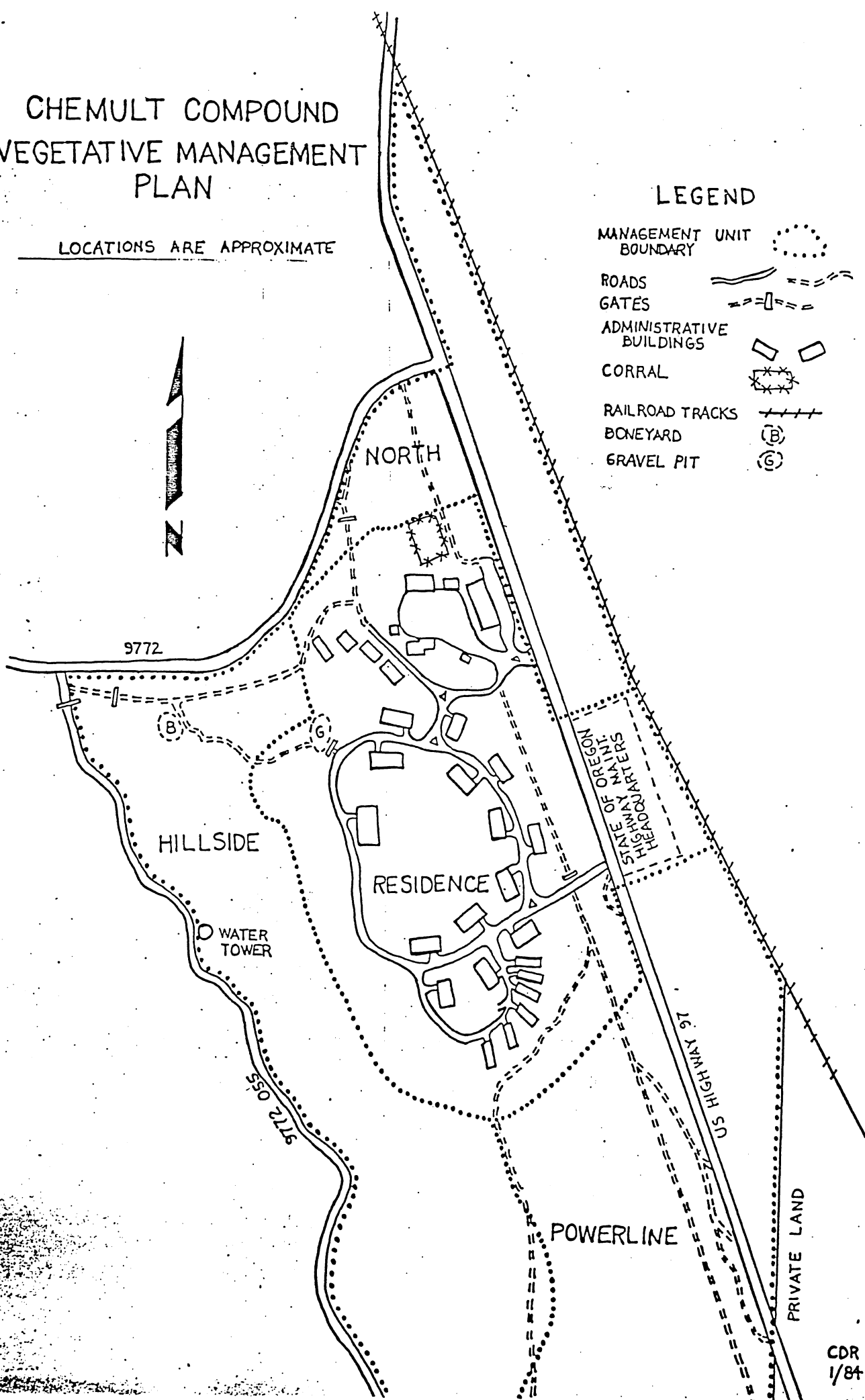
Benefits	Liabilities
1. Some screening available between residences and between residences and the highway.	1. Hazard trees present.
2. Firewood source available.	2. Lack of species diversity throughout most of the area.
3. Low fire hazard in some portions of the area.	3. The lodgepole pine present in the area rates high in susceptibility to attack by the mountain pine beetle.
4. Potential to increase species diversity particularly near the residences.	4. In some portions of the area there is a high fire hazard due to fuels build-up. (Particularly in the area immediately north of the corrals and along the hillside in the western portion of the area.
5. Fall color from aspen trees present.	5. Lack of understory trees (advanced regeneration) and brush species in some areas.
6. Some wildlife habitat and snags present.	6. Lack of both visual and audial screening in some areas between residences and between the residences and the highway.
	7. Too much shading near some residences.
	8. Inadequate openings within the administrative site and the residence area to pile snow.

CHEMULT COMPOUND VEGETATIVE MANAGEMENT PLAN

LOCATIONS ARE APPROXIMATE

LEGEND

- MANAGEMENT UNIT BOUNDARY 
- ROADS 
- GATES 
- ADMINISTRATIVE BUILDINGS 
- CORRAL 
- RAILROAD TRACKS 
- BONEYARD (B) 
- GRAVEL PIT (G) 



CDR
1/84

MANAGEMENT UNITS

The plan area was subdivided into four management units for evaluation and planning treatments. The boundaries of the units are mapped on the preceding page. Descriptions and estimated acreage for each management unit follows:

A. North Unit (31 Acres)

Description: The area is characterized by an overstory of mature lodgepole, which is overstocked and stagnating. It ranges from 6" to 16" in diameter. There is a small amount of mistletoe and western gall rust present. The understory is in poor condition. It has been suppressed, many trees are forked, and some are heavily mistletoed. A portion of the area was planted with lodgepole pine at a six by six foot spacing in the spring of 1983. The mountain pine beetle is currently active in small patches within the unit and is causing some mortality. Bitterbrush is common where the overstory is light but is very scattered where the overstory is heavy. The area is flat. The unit is traversed by a powerline/gas line corridor and by US Highway 97.

B. Residence Unit (51 Acres)

Description: Within the immediate vicinity of the residences and the ranger station, the area is characterized by lawns and scattered trees of various sizes and species including ponderosa pine, lodgepole pine and aspen. Intervening areas and the perimeter is primarily mature lodgepole 8" to 14" in diameter, and stagnating. Hazard trees occur throughout the unit. The mountain pine beetle is currently active in small patches and is causing mortality. The understory is quite variable. In places it is nearly nonexistent; in other places it is present in thick clumps. The understory is mostly lodgepole seedlings with some ponderosa pine. A portion of the area was planted with lodgepole at a six by six foot spacing in the spring of 1983. Bitterbrush is common and there are scattered snowbrush and greenleaf manzanita shrubs. The area is flat except for the portion west of the residences which has a eight to ten percent slope and an eastern aspect. Improvements needing protection, such as administrative buildings, residences, powerlines, gas, water, and telephone lines, occur throughout the area. A shaded fuelbreak is located on the hillside west of the residences.

C. Hillside Unit (50 Acres)

Description: This area consists of scattered old growth ponderosa pine that is 18" and larger in diameter, over mixed lodgepole and ponderosa pine 1" to 14" in diameter. This second story is vastly overstocked and is showing signs of intense intertree competition. A minor component of sugar pine is also present in the stand.

C. Hillside Unit (50 Acres) Continued

Mortality is occurring due to suppression, snow damage, and the mountain pine beetle which is attacking both lodgepole and ponderosa pine of all sizes from saplings to old growth overstory trees. Mistletoe is patchy but heavy where present. The brush component consists of a mixture of snowbrush, greenleaf manzanita, and bitterbrush on the lower slopes. Sedge is thick where there has been some disturbance and in natural openings within the stand. The area has a northeastern to eastern aspect with slopes ranging from five to thirty percent. Some previous logging activity, possibly a high risk ponderosa pine cut, occurred over ten years ago. The main water lines running from the water tower to the compound bisect this unit. A wildlife guzzler is located just below the water tower. Also, in the northern portion of the unit is the district boneyard.

D. Powerline Unit (28 Acres)

Description: This area is flat. It is characterized vegetatively by a mature lodgepole pine overstory that is stagnant and mistletoe infected. The stand density varies. Diameters range from 10" to 16". The understory is mostly lodgepole seedlings with a few scattered ponderosa pine saplings. It is in poor condition. Mistletoe and forking is common and the trees appear suppressed. A portion of the area was planted with lodgepole pine at a six by six foot spacing in the spring of 1983. The mountain pine beetle is active in small patches. Past firewood cutting has taken most standing dead. A powerline/gas line corridor and the highway 97 corridor traverse the unit. There are also a few old road spurs.

Each of the four management units were analyzed in relation to the identified vegetative benefits and liabilities. See Table 1 for the results of this analysis.

Table 2 illustrates the priorities for treatment for each benefit and liability within each management unit. These values, high, medium and low, show the consensus of the planning team. The priority ratings were then used as guidelines for developing management direction and treatments.

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TABLE 1: ANALYSIS OF MANAGEMENT UNITS BY EXISTING VEGETATIVE BENEFITS AND LIABILITIES

MANAGEMENT UNITS	BENEFITS						LIABILITIES					
	Visual + Audial Screening	Firewood Source	Low Fire Hazard	Species Diversity	Fall Color	Wildlife Habitat	Hazard Trees	LP Susceptibility to Attack by MPB	Fuels Buildup	Understory Trees + Brush Species	Shade	Snow Piling Areas
NORTH	NA	P OK	P OK	P OK	NP OK	P OK	P OK	P +	P +	NP -	NA	NA
RESIDENCE	P -	P OK	P OK	P -	P -	P OK	P +	P +	NP OK	NP -	P +	P -
HILLSIDE	NA	P OK	NP -	P OK	NP OK	P OK	P OK	P +	P +	P OK	NA	NA
POWERLINE	P OK	P OK	P OK	P OK	NP OK	P OK	P +	P +	NP OK	NP -	NA	NA

P = Present
 NP = Not Present
 NA = Not Applicable
 + = Too Much
 OK = Enough
 - = Not Enough

CHEMULT COMPOUND VEGETATIVE MANAGEMENT PLAN

TABLE 2: PRIORITY FOR TREATMENT BASED ON EXISTING VEGETATIVE BENEFITS AND LIABILITIES

MANAGEMENT UNITS	BENEFITS						LIABILITIES					
	Visual + Audial Screening	Firewood Source	Low Fire Hazard	Species Diversity	Fall Color	Wildlife Habitat	Hazard Trees	LP Susceptibility to Attack by APB	Fuels Buildup	Understory Trees + Brush Species	Shade	Snow Piling Areas
NORTH		L	M	L	L	M	H	H	L/H*	L		
RESIDENCE	H	L	H	H	H	L	H	H	L	H	H	H
HILLSIDE		L	M	L	L	M	L/H**	H	M	L		
POWERLINE	L	L	M	M	L	M	H	H	L	H		

H = High
M = Medium
L = Low

* = High in the corral area

** = High near the water tank

VEGETATIVE MANAGEMENT DIRECTION AND PROPOSED TREATMENTS

For each unit, the management direction outlines the desired vegetative conditions. The proposed treatments describe the methods to use to achieve these conditions and other vegetative benefits.

North Unit

Management Direction:

1. Reduce susceptibility of the lodgepole pine in the unit to attack by the mountain pine beetle.
2. Eliminate hazard trees along the powerline to prevent power outages.
3. Reduce the fuels and fire hazard in the area immediately north of the corral area.
4. Provide wildlife habitat and snags in the unit.

Proposed Treatments:

1. Harvest the unit with a combination of commercial thinning and group selection type cuts. Remove all mountain pine beetle infested trees. Thin to the minimum spacing necessary to "beetle proof" the stand. Group selections should be relatively small, usually ranging from a group of ten trees up to 1/4 acre in size. Plant 2-0 stock of lodgepole pine with some scattered ponderosa pine in the group selection areas. Schedule a series of small group selection cuts over the next 20 to 30 years to encourage age diversity and reduce susceptibility to insect attack in the future.
2. Designate existing hazard trees along the powerline for cutting. Incorporate these trees into the harvest activity or request Midstate Electric Cooperative to cut them.
3. Treat the existing fuels in the area north of the corral along with the slash created by the harvest activity. If the harvest activity does not occur within a timely manner, consider hand piling the slash and burning by a Forest Service crew or as a workday project.
4. Select and designate wildlife snags. Shorter trees would be the most desirable wildlife trees because they should stand longer and would not fall on the highway, railroad tracks, powerline, or into the corral.

Residence Unit

Management Direction:

1. Improve existing screening and create additional screening between the residences and the highway and where desirable between residences.
2. Maintain the existing fuel break and handline along the western boundary of the unit.
3. Encourage species diversity by increasing the numbers of hardwood, brush, and conifer species in the unit.
4. Eliminate hazard trees.
5. Reduce the susceptibility of the lodgepole pine to attack by the mountain pine beetle.
6. Reduce the amount of shade present around some residences to enhance winter heating and to reduce ice buildup.
7. Create openings for snow piling.

Proposed Treatments:

1. Harvest trees through a combination of individual tree selection and group selections. Trees selected individually would include hazard trees, trees causing excessive shade, and individual trees which are mountain pine beetle infested. The group selections will include trees being removed for snow piling areas, centers of mountain pine beetle attacks, and overstory trees which could be removed to release existing understory trees. Group selections will generally involve between 10 and 15 trees. Areas cleared for snow piling will not be reforested. Those openings resulting from the group selections between the residences and the highway will be planted with ponderosa and lodgepole pine transplants. These transplants should be of sufficient height to provide some visual and audial screening. Local brush species could also be planted for additional screening in these openings if sufficient funding is available. A series of small group selection cuts should be scheduled over the next 20 to 30 years to encourage age diversity and reduce susceptibility to diseases and future insect attacks.
2. High value trees near residences and administrative buildings will be tagged with nontoxic repellent pheromone wafers to reduce their susceptibility to attack by the mountain pine beetle. These wafers would need to be placed on the trees prior to the beetle flights and replaced yearly. 1/

Proposed Treatments:(Continued)

3. Additional hardwoods, conifers, and shrub species should be planted where needed for screening between residences. Assistance from the forest landscape architect will be requested.
4. Annual maintenance of the shaded fuel break and handline will be scheduled. This would involve mainly a cleaning type activity to keep fuels to a minimum. It would be accomplished by Forest Service crews possibly as part of fire training.

Hillside Unit

Management Direction:

1. Reduce the susceptibility of the lodgepole pine and ponderosa pine to attack by the mountain pine beetle.
2. Improve the general vigor of the stand.
3. Reduce the fire hazard.
4. Protect the water tank, water lines and guzzler.
5. Create recreational trails where opportunities exist to do so.
6. Provide wildlife habitat and snags.

Proposed Treatments:

1. Harvest the unit with a commercial thin. This should provide the remaining trees with additional growing space and should result in a healthier timber stand. In addition to the thinning, all mountain pine beetle infested and dead trees (other than designated wildlife trees) will be individually selected for harvest. The present diversity in species will be maintained following harvest. A precommercial thin of the trees less than merchantable size would follow the harvest.
2. The existing fuels would be treated with the slash created by the harvest activity.
3. Hazard trees near the water tank would be designated and removed during the logging activity.
4. Logging skid trails would be located in advance and existing skid trails selected for use on the basis of suitability for recreational trails and logging needs.
5. Select and designate wildlife snags within the unit.

Powerline Unit

Management Direction:

1. Reduce the susceptibility of the lodgepole pine within the unit to attack by the mountain pine beetle.
2. Eliminate hazard trees along the powerline to prevent power outages.
3. Establish a replacement timber stand and increase species diversity within the stand.
4. Provide wildlife snags and habitat within the unit.

Proposed Treatments:

1. Harvest the unit with a combination of commercial thinning and group selection type cuts. Remove all mountain pine beetle infested trees. Thin to the minimum spacing necessary to "bettle proof" the stand. Group selections should be relatively small, usually ranging from a group of ten trees up to 1/4 acre in size. Plant 2-0 stock of lodgepole pine with some scattered ponderosa pine in the group selection areas. Schedule a series of small group selection cuts over the next 20 to 30 years to encourage age diversity and reduce susceptibility to insect attack in the future.
2. Designate existing hazard trees along the powerline for cutting. Incorporate these trees into the harvest activity or request Midstate Electric Cooperative to cut them.
3. Inactivate unnecessary spur roads within the unit. Plant these roads with 2-0 lodgepole pine and ponderosa pine stock to help in the establishment of the replacement stand.
4. Select and designate wildlife snags that will not fall on the highway, railroad tracks, or the powerline.

PROJECT IMPLEMENTATION

1. The first harvest treatment will occur in the spring of 1984 and will be scheduled to terminate by July 15, 1984. This would allow for the logging to occur prior to the next mountain pine beetle flight. All management units will be treated at this time.
2. All material will be removed by a timber sale contract. Bids will be solicited from several operators.
3. Slash treatment will be a combination of hand and machine piling by the Forest Service. When burning slash the smoke management plan for the area will be followed.
4. Following approval of the plan, the ranger will hold a district meeting of employees and families to review and discuss the plan. The residents at the state highway maintenance station and local Chemult residents will be invited to attend. There will be public notice that a plan has been developed and notices will be posted in the town of Chemult. The forest public information officer will be contacted and a press release will be issued.
5. For aesthetic reasons wildlife trees and snags will be designated by tags, not paint.
6. The residents will be consulted when selecting hazard and excess shade trees for removal, and when locating screening between residences. The possibility of pruning excess shade trees will be considered if removal is not desirable.
7. When opening areas to pile snow, the trees will be pushed over and root wads removed. Eliminating stumps in these pile areas will reduce obstacles to equipment during snow plowing operations. Locations for snow pile areas will be selected through consultations with the snow plowing operator.
8. The forest landscape architect will assist in plant species selection and planting locations for screening. This assistance will be particularly important in the residential areas and near the administrative building where an opportunity exists for enhancement.
9. An annual work day will be scheduled by the district ranger for maintenance and future improvements, such as planting flowers, maintaining wafers, or developing a children's playground area.
10. A permanent file will be established on district to maintain records of planned and future activities that occur on the compound.
11. An annual review of the vegetative conditions of the compound will be conducted by the district silviculturist. A written report will be submitted to the district ranger by August 30th each year. A sample review form is attached.
12. Fixed photo points and a photo schedule will be set up by the end of June 1984, to aid in recording vegetative changes over time.

Date: _____

Reviewer: _____

Chemult Compound Vegetative Management Plan Annual Review

Management Unit: _____

A. Present condition of vegetation within the unit:

1. Overstory trees: _____

a. Amount of MPB activity present: _____

b. Susceptibility rating to MPB attack: _____

2. Understory trees: _____

3. Brush component: _____

B. Treatment or activities over the past year:

1. a. Harvest: _____

b. Fuels: _____

c. Reforestation: _____

d. Other activities or improvements: _____

2. Evaluation of treatments: _____

a. Treatments in relation to management direction in plan: _____

C. Additional Treatments needed/timing of treatments: _____

D. Modification of plan (Explain necessary changes): _____

E. Photo series needed (Schedule date): _____

F. Additional Comments: _____

FOREST SERVICE DETERMINATION OF EFFECT

The proposed project described in the accompanying text and graphic material has been measured against the "criteria of effect" listed in Revised 36 CFR 800.3 and 800.4 to determine the nature of effect, if any, upon properties determined eligible for or included on the National Register of Historic Places.

- ☒ We have determined that the proposed project will have "no effect" on any listed or eligible cultural resources. We will retain documentation of this determination and proceed with project implementation as proposed if you do not respond within 15 days.
- ☐ We have determined that the proposed project will have "no adverse effect" on any listed or eligible cultural resources. We will document this determination to the Advisory Council on Historic Places and proceed with project implementation as proposed if you do not respond within 30 days.
- ☐ We have determined that the proposed project will have "adverse effect" on cultural resource(s) listed on or eligible for the National Register of Historic Places. A description of each affected resource, and a plan to mitigate anticipated adverse effects are attached. Please advise us of your opinion within 30 days so that we may proceed with development of a preliminary case report.

Attachments

- ____ Project description
 ____ Description of listed or eligible properties
 ____ Plan for mitigating adverse effects

PROJECT DATA:

FOREST SERVICE

NAME/KIND Chemult Compound Study Area By Frances M. PhilpeltCOUNTY KlamathTitle ArcheologistUSGS. QUADS Chemult 7 1/2"Date 12/20/83FOREST/DISTRICT Winema/Chemult

SHPO USE:

☒ Concur☐ Do not concur

Comments: _____

By _____

Title _____

Date _____

JAN 12 1984D.W. POWERS
DEPUTY SHPO